## CANADIAN ART SHOW AT TATE

A major exhibition of Canadian art opening February 5 at the Tate Gallery, London, will be the first in 25 years to be shown in Britain's national gallery of modern art. Organized by the National Gallery of Canada at the invitation of the Tate Gallery, the display will illustrate the most significant developments in Canadian painting during the quarter-century.

## A PREVIOUS SHOW

Charles F. Comfort, director of the National Gallery of Canada, states in the catalogue prepared for this show: "This is the second exhibition of Canadian painting to be held at the Tate Gallery. It is strikingly different in character from its predecessor, 'A Century of Canadian Art', shown there in 1938. On that occasion the National Gallery of Canada sent a comprehensive survey of painting and sculpture, as well as examples of aboriginal Indian work and of the early arts of the Province of Quebec. It is interesting to note that the director of that day, the late Eric Brown, reviewed the exhibition on one of the earliest BBC television programmes...."

A number of important public and private collections in Canada contributed 103 paintings to the Exhibition. Two works were lent by the Queen, one by Goodridge Roberts and the other by Jean-Paul Lemieux. Following the Tate Gallery's request for a small group of the mostimportant Canadian painters since 1938, the Board of Trustees of the National Gallery of Canada approved the choice of 11 artists.

## THE ARTISTS

Represented are Goodridge Roberts, Montreal; JeanPaul Lemieux, Quebec; the late Paul-Emile Borduas; Alfred Pellan, Montreal; Jack Shadboult, Vancouver; Alex Colville, Sackville; Jean-Paul Riopelle, now living in Paris; Jean McEwen, Montreal; Harold Town, Toronto; Ronald Bloore, Regina, and Graham Coughtry, Toronto.

Each painter will be represented by up to a dozen paintings. The total effect on the viewer will be of a number of one-man exhibitions within the large exhibition, and the London public will thus have an opportunity to get a better idea of each individual artist's work than in a comprehensive survey exhibition where there are only one or two by many artists. The 1938 exhibition was just such a survey.

## RADAR FOR SMALL VESSELS

A transistorized marine radar has been developed in the navigational aids section of the Radio and Electrical Engineering Division of the National Research Council in Ottawa. A prototype has already been delivered to a Canadian firm for commercial production. A second model underwent successful evaluation trials last summer aboard the NRC motor vessel "Radel II". The chief advantages of the new radar are its remarkably low cost, ease of installa-
tion, economy of operation, and a radical simplification of service problems.

It is expected that the new radar will be available for about half the price of models now on the market: this means that, for the first time, purchase of radar equipment will come within easy reach of the fishing industry and of owners of small vessels plying inland and coastal waters.

## SIZE ADVANTAGES

In the crowded wheelhouse of a small vessel, where space is always at a premium, the most attractive feature of the new radar will be that its main parts have been reduced to two light-weight "packages", the display chassis and the modular chassis. The former, containing the 10 -inch cathode-ray tube and its circuitry, may be either table-mounted or bulkheadmounted like a wall clock. The modular chassis may be conveniently located in an out-of-the-way spot; as cabling from it to the display chassis can be extended to 20 feet without difficulty. The display package weighs only 31 pounds, the modular only 35 , so that each can easily be handled by one person. (Design of the antenna, motor drive and radome for the production model has been left to the manufacturer.)

The entire system is so highly transistorized that it can be operated from a single 12 -volt storage battery with a current drain of seven amperes (excluding only the antenna motor).

The display circuitry is confined to three plug-in boards, adaptable to printed circuit techniques, and built as complete sub-assemblies: this means that if anything goes wrong the faulty board need simply be replaced, after which repairs can be made at convenient times.

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## TELEPHONE INDUSTRY IN 1961

Telephones in operation in Canada in 1961 numbered $6,014,015$, a rise of 5 per cent from the 1960 total of $5,728,167$. Large increases were recorded for telephones on individual lines, on private branch exchanges and on extensions.

Telephones operated by manual switchboards decreased further. At the end of 1961, the number of phones on manual switchboards at 656,681 was 11 per cent of the total, compared to 12 per cent the previous year.

## CALLS MADE

The number of completed calls for all systems was estimated at $10,242,657,000$ in 1961 , up 9 per cent from the 1960 total of $9,364,586,000$. The number of calls per telephone in 1961 increased to 1,741 from 1,672 , and calls per capita to 568 from 537. Long-distance calls in 1961 rose 5 per cent, to $226,258,318$ from $215,274,970$.

The number of telephones in Canada for 100 of the population rose in 1961 to 32.6 from 32.2 in 1960. Ontario continued to lead in telephone density, with 38.5 telephones per 100. British Columbia followed with 36.7 .

